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781-585-2322 • 55 LANDING ROAD, KINGSTON, MASSACHUSETTS 02364 • WWW.JONESRIVER.ORG

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January 18, 2016

Arthur Burritt  
Chief  
Reactor Projects Branch 5 (Region 1)  
Division of Reactor Projects  
U.S. Nuclear Regulatory Commission

Jack Davis  
Director  
Japan Lessons Learned Division  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission

Daniel Dorman  
Region 1 Office Administrator  
U.S. Nuclear Regulatory Commission

Robert Kuntz  
Senior Project Manager, Hazards Management Branch  
Japan Lessons Learned Division  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission

**Re: Analysis of AREVA Flood Hazard Re-Evaluation Report for Pilgrim Nuclear Power Station**

Dear NRC Staff,

On behalf of Jones River Watershed Association, I would like to provide you with the enclosed report, **Analysis of AREVA Flood Hazard Re-Evaluation Report for Pilgrim Nuclear Power Station** ("CRC Report") that was published in December 2015.

In March 2015, Entergy submitted its Pilgrim Nuclear Power Station Flooding Hazard Reevaluation Report (doc. #51-9226940-000; "AREVA Report") to the NRC. We followed up with your agency about Entergy's AREVA Report by providing a comment letter dated August 5, 2015,<sup>1</sup> which outlined many concerns and issues we believed needed further attention by the NRC.

We further continued our research and contracted the Florida-based Coastal Risk Consulting (CRC) firm to analyze the methodologies and conclusions presented in Entergy's AREVA Report. It is important to note that due to funding limitations CRC only analyzed Energy's AREVA Report and did not carry out any new studies that would further present our concerns.

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<sup>1</sup> JRWA letter to NRC. Re: Pilgrim Nuclear Power Station Flooding Hazard Reevaluation AREVA Report (doc. #51-9226940-000). Aug. 5, 2015. <[http://www.capecodbaywatch.org/wp-content/uploads/2015/08/JRWA\\_080515\\_re-PNPSflooding-reeval-of-031215.pdf](http://www.capecodbaywatch.org/wp-content/uploads/2015/08/JRWA_080515_re-PNPSflooding-reeval-of-031215.pdf)>

According to the CRC Report, Entergy's AREVA Report underestimates and omits important risk factors, uses outdated data, and does not consider future risk estimates for rainfall and sea level rise. Below are some major findings, but **we request that you please review the report for more information.**

- "Local intense precipitation" is found in Entergy's AREVA Report as a primary hazard of concern that could inundate the site with several feet of rainwater. Despite this, CRC found that this mechanism is underestimated in Entergy's report since it uses outdated precipitation data and does not consider future climatic conditions that are projected to increase precipitation amounts during heavy rainfall events (think of the October 2015 events in South Carolina).
- While the storm surge analysis in Entergy's AREVA Report was robust, sea level rise over the next 50 years is understated since it relies heavily on historic sea level rise rates – producing a sea level rise more than 2.5 feet lower than current projections.
- Groundwater, subsidence, and erosion are not considered in Pilgrim's flood assessment; further underestimating risks (especially related to extreme storm events).
- Pilgrim's flood assessment focuses solely on past risk conditions and does not include scenarios that address updated projections for future risk, specifically with regard to climate change. The CRC report shows that the Pilgrim site will be inundated with non-storm tidal flooding by mid-century and that a surge from a category 4 hurricane could already flood the site today.

Given Entergy's recent announcement that Pilgrim will be shut down no later than June 2019, it is more important than ever to fully understand the risks associated with coastal hazards. For example, as sea levels increase, so do groundwater elevations. Contamination present on the Pilgrim site will, no doubt, continue to migrate toward Cape Cod Bay even after Pilgrim stops generating power. The CRC Report findings further illustrate the need for Pilgrim to be decontaminated and decommissioned as soon as possible – within a decade of closure, as opposed to being allowed to sit idle for decades or up to 60 years under long-term "SAFSTOR."

In effect, your agency currently allows Pilgrim's nuclear waste to be stored on-site for hundreds of years. Today, Pilgrim's dry casks are within reach of rising tides, coastal storms, and salt-water degradation. Unless Pilgrim's dry casks will be transported off-site within a decade, the ISFSI must be moved to higher elevation, farther away from Cape Cod Bay and securely protected from natural and man-made hazards. We question whether any future barge transport<sup>2</sup> of Pilgrim's nuclear waste has dictated the current location of dry casks close to shore. **We request information about plans to ship nuclear waste offsite at Pilgrim, including timing and destination, in order to understand this enormous issue for the region.**

We also recently had Northeastern Geospatial Research Professionals update the Pilgrim site maps that we provided NRC staff in February 2015,<sup>3</sup> based on more current LiDAR information. We will provide these updated maps soon. When presenting the maps last February, we also requested the 2014 AREVA site plans for the Pilgrim site and we are dismayed that neither Entergy nor the NRC has met this request.

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<sup>2</sup> The 2002 U.S. Department of Energy's (DOE) Final Environmental Impact Statement (FEIS) for Yucca Mountain outlines plans for Pilgrim's casks (transport casks) to be shipped offsite by barge through Cape Cod Bay to Boston, where a rail service would then take the casks to their final destination in Nevada. See: <<http://www.capecodbaywatch.org/2015/11/what-if-yucca-mountain-did-happen/>>

<sup>3</sup> Northeastern Geospatial Research Professionals. Feb. 2015. Pilgrim Elevation Analysis and Maps. <<http://jonesriver.org/pilgrim-elevation-analysis>>

It is clear from our work on this issue, including the CRC Report, that the Pilgrim site needs to move aggressively toward immediate cleanup post shutdown, and that Pilgrim's nuclear waste is precariously positioned seaside. We are eager to follow-up with NRC staff about these issues. **Please contact me at your earliest convenience to set up a time to meet and discuss these issues further.**

Sincerely,



Pine duBois  
Executive Director, Jones River Watershed Association  
pine@jonesriver.org

Enclosure:

Coastal Risks Consulting. Dec. 2015. Analysis of AREVA Flood Hazard Re-Evaluation Report for PNPS  
Also found at: [http://www.capecodbaywatch.org/wp-content/uploads/2012/06/CRC-PNPS-Analysis-Report\\_Dec2015\\_FINAL.pdf](http://www.capecodbaywatch.org/wp-content/uploads/2012/06/CRC-PNPS-Analysis-Report_Dec2015_FINAL.pdf)

cc:

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Rep. Tom Calter  
Senator Vinny deMacedo  
Attorney General Maura Healy  
Rep. Randy Hunt  
Congressman William Keating  
Senator Edward Markey  
Rep. Matt Muratore  
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Dr. Marvin Resnikoff, Radioactive Waste Management Associates  
Mr. Raymond Shadis, New England Coalition